

Claims

1. Use of a host cell population of mature, healthy lymphocyte cells obtained from blood of a non-diseased host organism for the preparation of a cell composition for use in subsequent autologous therapeutic transplantation therapy of a disease or disorder of said host organism, wherein the cells are obtained from the host organism before the disease or disorder develops or manifests itself.

2. A method of autologous therapeutic transplantation therapy of a disease or disorder of a host organism, said method comprising transplanting a host organism with a cell composition prepared from a host cell population of mature, healthy lymphocyte cells obtained from blood of said host organism when non-diseased, wherein the cells are obtained from the host organism before the disease or disorder develops or manifests itself.

3. A composition comprising a host cell population of mature healthy lymphocyte cells obtained from blood of a non-diseased host organism for use in subsequent autologous therapeutic transplantation therapy of a disease or disorder of said host organism, wherein the cells are obtained from the host organism before the disease or disorder develops or manifests itself.

4. A use, method or composition as claimed in any one of claims 1 to 3, wherein said host cells are harvested from said host organism at a stage when there is no direct prediction, suggestion or suspicion that said disease or disorder may develop.

5. A use, method or composition as claimed in any one of claims 1 to 4, wherein said host organism is a human.

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6. A use, method or composition as claimed in any one of claims 1 to 5, wherein said host organism is juvenile, adolescent or adult, at the time the cells are obtained.

10 8. A use, method or composition as claimed in any one of claims 1 to 7, wherein the immune system of said host organism is uncompromised, at the time the cells are obtained.

15 9. A use, method or composition as claimed in any one of claims 1 to 8, wherein said lymphocyte cells are T-lymphocyte cells.

20 10. A use, method or composition as claimed in any one of claims 1 to 9, wherein said therapy is therapy of a chronic condition.

25 11. A use, method or composition as claimed in any one of claims 1 to 9, wherein said therapy is cancer therapy.

30 12. A use, method or composition as claimed in any one of claims 1 to 9, wherein said therapy is for HIV infection or AIDS.

13. A use, method or composition as claimed in claim 12, wherein said host cell population comprises $CD4^+$ cells.

35 14. A use, method or composition as claimed in any one of claims 1 to 13, wherein said host cell population is maintained in a state of dormancy.

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15. A use, method or composition as claimed in any one of claims 1 to 14, wherein said host cell population comprises a genetically modified cell.

5 16. A use, method or composition as claimed in any one of claims 1 to 15 wherein, after removal from the host and before transplantation, said host cell population is stored by freezing the cells.

10 17. A method of making and/or maintaining lymphocyte cells dormant, said method comprising freezing said lymphocyte cells to a temperature at or below -269°C.

15 18. A method as claimed in claim 17 wherein said lymphocyte cells are obtained from blood.

19. A method as claimed in claim 17 or claim 18 wherein said lymphocyte cells are T-lymphocyte cells.

20 20. A dormant lymphocyte cell population obtained by the method of any one of claims 17 to 19.

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organism.

A still further aspect of the invention provides use of a host cell population obtained from a non-diseased host 5 organism for subsequent autologous transplantation therapy of said host organism.

The host organism may be any eukaryotic organism, but 10 preferably will be an animal, more preferably a mammal, and most preferably a human. Other representative host organisms include rats, mice, pigs, dogs, cats, sheep, horses and cattle.

15 The term "non-diseased" is used herein to describe a state in which the host organism is not suffering from, or demonstrating symptoms of, the disease or disorder, which it is subsequently intended to treat by the transplantation procedure.

20 Furthermore, in certain embodiments of the invention, the host organism is preferably not predisposed to, or at risk from, any particular disease or disorder e.g. preferably not exhibiting any symptoms or manifestations predictive of a subsequent disease or disorder.

25 Likewise, the host organism is preferably not suffering from any injuries or damage which may give rise to an anticipated or expected condition. A major idea or concept behind the present invention is to harvest or collect the host cells from the host organism at a stage 30 when there is no direct prediction, suggestion, or suspicion that a particular disorder or disease may develop, for use against a future possible or unpredicted event, or an event which may occur simply by